The Influence of Structural Features and Surface Proper- 2o-119-5-33/59
ties on the Froth Flotation Extraction of Poorly Floatable Lead Minerals

and composition strongly differentiates from the easily floa-
table minerals. Therefore the authors tried to explain the
unsatisfactory results in the floatation of the above mentioned
minerals by the investigation of their crystallo-chemical
characteristic features and of their surface properties with
regard to water and various flotation reagents. Based on the
results of these investigations also the most effective methods
for the floatation of the mentioned minerals are to be found.
The authors first of all calculated the energies of the cry-
stal lattices of the lead minerals to be investigated by
means of the method by Fersman. According to the results given
in a table the energies of the crystal lattices of cerussitem
anglesite and wulfenite (group I) differ only little from each
other. The second group of minerals (mimetisite,pyromorphite
and vanadinite) have great values of lattice energies. The
greatest energies of the crystal lattice have beudantite, mime-
site, plumbo‿jbojarosite and pyromorphite. Already the given
data make possible an orientation in the estimation of the
flotation properties with regard to their capability for inter-
action of all mentioned minerals with the reagents. The inve-

Card 2/3

The Influence of Structural Features and Surface   2o-119-5-33/59
Properties on the Froth Flotation Extraction of Poorly Floatable Lead Minerals

stigation carried out showed the coincidence of the flotation
properties with the capability for interaction of the mentioned
minerals with the calculated values of energy of the crystal
lattice. Thus, for instance, the effectiveness of the action
of sodium sulfide on oxide lead minerals decreases in the tran-
sition from the minerals of group I to the minerals of groups
II and III. Various details concerning the flotation of poorly
floatable minerals are given. Phosphotene, petroleum, lubricating
oil for automobiles, and polugudron together with xanthogenates
served as new effective flotation reagents. Finally the author
thanks N.V. Belov, Member, Academy of Sciences, and G. B. Bokiy
for valuable advice. There are 1 table and 2 references, 0 of
which are Soviet.

SUBMITTED: December 18, 1957

Card 3/3

SOROKIN, M.M.; RAUKHVARGER, Ye.L.; SHCHEVELEVA, A.S.

Problem of the flotation action of willow oil and its components.
Zhur. prikl. khim. 37 no.2:422-429 F '64.

(MIRA 17:9)

1. Institut gornogo dela imeni Skochinskogo.

SHCHEV'EV, L.M.

Case of systemic scleroderma. Terap.arkh. 33 no.8:103-104 '61.
(MIRA 15:1)

1. Iz terapevticheskogo otdeleniya 2-y gorodskoy bol'nitsy,
Pereslavl'-Zalesskiy. (SCLERODERMA)

SHCHEV'YEV, L.M.

Some characteristics of the course of trichinosis. Sov. med. 28
no.7:129-131 Jl '64.
(MIRA 18:8)

1. Terapevticheskoye otdeleniye (zav. L.M.Shchev'yev) Losino-
Petrovskoy (Moskovskaya oblast·) gorodskoy bol'nitsy (glavnyy
vrach F.A.Slavin).

SHCHEYMAN, A. I.

25956   Shcheyman, A. I. Nervnyy faktor v patogeneze vyalo granulirushchikh ran. V sb: Problemy vosstanovit. lecheniya invalidov Otechestv. voyny. Astrakhan', 1948, s. 203-07. Sm. Takzhe No. No. 25834, 25992, 26001.

SO: Letopis' Zhurnal Statey, No. 30, Moscow, 1948

SHCHEVYAKOVA, L.A.; KOTLYAR, G.Ya.; VLEDUTS, G.E.

Use of systems of binary structural notations for retrieval of
information about organic compounds. NTI no.4:31-34 '65.

(MIRA 18:6)

SHCHEZHIN, V. T.

"Behavior of Directional Negative-Sequence Protection With High Frezuency Blocking
by Induction Relays Under Conditions of the Transcient Frocesses Resulting From Short
Circuits in 400-KV Lines Equipped with Longitudinal Capacitative Compensaticn." Cand
Tech Sci, Moscow Crder cf Lenin Power Engineering Inst imeni V. M. Molotov, 19 Feb 54.
Dissertaticn (Vechernyeya Moskva Moscow 10 Feb 54)

SO: SUM 186, 19 Aug 1954

112-57-8-16530

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1957, Nr 8, p 74 (USSR)

AUTHOR: Shchezhin, V. T.

TITLE: Behavior of a High-Speed Filter Directional Carrier-Current Relay Protective System Under Transient Conditions Accompanying Short Circuits on 400-kv Lines (Povedeniye bystrodeystvuyushchey fil'trovoy napravlennoy vysokochastotnoy zashchity v usloviyakh perekhodnykh protsessov pri korotkikh zamykaniyakh v liniyakh 400 kv)

PERIODICAL: Sb. nauch. tr. Kuybyshevsk. industr. in-ta (Collection of Scientific Work of the Kuybyshev Industrial Institute), 1956, Nr 6, kv. 1, pp 139-149

ABSTRACT: This article presents the results of testing a directional carrier-current relay protective system staged on an electrodynamic simulator of a 400-kv transmission line. The reason for false operation of an induction relay under transient conditions is explained. A method of eliminating false relay operations is examined.

G.G.Ya.

Card 1/1

L 20697-65   EWT(1)/EWT(m)   SSD/AEDC(a)/AS(mp)-2/ASD(p)-3   JD

S/0124/64/000/008/B124/B124

ACCESSION NR: AR4047553

SOURCE: Ref. zh. Mekhanika, Abs. 8B719

AUTHOR: Temnikov, A.V., Shchibrayev, Ye. V.

TITLE: The use of the electroheat analogy in the study of heat emission associated with the flow around bodies of arbitrary configuration

CITED SOURCE: Tr. Kuyby*shevsk. aviats, in-t, vy*p. 15, ch. 2, 1963, 299-307

TOPIC TAGS: heat emission, heat emission coefficient, electroheat analogy, liquid flow, stream cooling

TRANSLATION: A method is proposed for the determination of local heat emission coefficients, based on the electroheat analogy. An analytical solution of the problem is not required in this connection, and it is not necessary to carry out a time-consuming harmonic analysis in order to determine the heat emission coefficient. Also eliminated is the need to find the mapping function or to resort to an approximate solution in the case of profiles which do not lend themselves to conformal mapping, as is necessary with the method proposed by G.A. Varshavskiy. The new method, presented in this article, may be extended to non-stationary problems. The solution technique on EI-12 or EGDA

Card 1/2

L 20697-65

ACCESSION NR: AR4047553

integrators is quite simple. The solution to a test problem is given (stream cooling of a circular cylinder), with the solution worked out on an ohmic resistance grid. Formulae are presented for calculating the elements of the grid. L. V. Knyazev.

SUB CODE: TD, IIE   ENCL: 00

Card 2/2

L 15715-66   EWT(1)/EPP(m)/EWT(m)/ETC(F)/EPF(n)-2/EWG(m)/EWA(d)/EWA(1)/FCS(k)

ACC NR: AT6003101   JD/WW   UR/3181/63/000/015/0299/0307

AUTHOR: Temnikov, A.V.; Shchibrayev, Ye.V.

ORG: None

TITLE: Use of an electrothermal analogy for study of heat transfer in flow around a body of arbitrary shape

SOURCE: Kuybyshev. Aviatsionnyy institut. Trudy, no.15, pt.2, 1963. Doklady kustovoy nauchno-tekhnicheskoy konferentsii po voprosam mekhaniki zhidkosti i gaza(Reports of the Joint scientific-technical conference on problems of the mechanics of liquid and gas), 299-307

TOPIC TAGS: convective heat transfer, heat conduction, integrated electronic device

ABSTRACT: The method of electrothermal analogy is based on an analogy between the mathematical description of heat conduction processes in solid bodies and processes of the propagation of an electric current in electrically conducting media. Limiting the case to steady state processes, the heat conduction equation for the temperature field can be written in the form:

$$\frac{\partial^2 t}{\partial x^2} + \frac{\partial^2 t}{\partial y^2} + \frac{\partial^2 t}{\partial z^2} = 0. \qquad (2)$$

Card 1/2

L 15715-66

ACC NR: AT6003101   2

The boundary condition is written in the form:

$$t_w = t_w(x, y, z). \qquad\qquad (3)$$

After transformation to a dimensionless form, the authors proceed to a
mathematical solution of the problem. It is claimed, on the basis of
the results, that the method of electrothermal analogy is applicable to
the study of local heat transfer, and that it is simple and sufficiently
accurate for engineering purposes. Use of the method is stated to be
especially advantageous if there is available an EI-12 electronic inte-
grator, Type EGDA, or other similar machines, for solution of the diff-
erential Laplace equations which arise in the problem. Orig. art. has:
20 formulas and 3 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 006/ SOV REF: 000/ OTH REF: 003

SHCHIBRAYEVA, L.V. (Kuybyshev-obl.)

Diagnostic value of the pyramidon test in subfebrile conditions.
Kaz. med. zhur. no.5:77-78 S-O '61.   (MIRA 15:3)
                            (FEVER)
                        (AMINOPYRENE)

TYURINA, G.I.; SHCHIBRIK, V.I.

Experience in biogeochemical studying of a section of a complex
metal deposit in central Kazakhstan. Mat.po geol.i pol.iskop.
TSentr.Kazakh. no.2:44-48 '62.   (MIRA 15:12)
    (Kazakhstan--Ore deposits) (Geochemical prospecting)

SHCHIBROV, A.

We are constructing simplified manure pits. Sel'.stroi. 15
no.5:28 My '60.   (MIRA 13:8)

1. Glavnyy agronom Ivanovskogo oblsel'khozupravleniya.
            (Farm manure--Storage)

SHCHIBRYA, A.A. I KOPERZHINSKIY, V.V.

25072 KOPERZHINSKIY, V.V. I SHCHIBRYA, A.A.   Voprosy Biologii Tsveteniya I
Plodoobrazovaniya U Lyutserny. V. Sb: Voprosy Kormodobyvaniya.
Vyp. 2. M.,1949, S. 113-20

SO: Letopis', No. 33, 1949

SHCHIBRYA, A. A., kand.sel'skohozyaystvennykh nauk; MART'YANOVA, A. I.;
    kand.sel'kokhozyaystvennykh nauk

    Pollination characteristics of the bird's foot trefoil. Agrobio-
    logiia no.5:694-697 S-O '60.   (MIRA 13:10)

    1. Vsesoyuznyy nauchno-issledovatel'skiy institut kormov imeni
    V.R. Vil'yamsa, Moskovskaya oblast'.
                    (Bird's foot trefoil)
                    (Fertilization of plants)

SHCHIBRYA, A.A.

Conditions necessary for the formation of rhizomes in the awnless
brome grass and quack grass. Biul. MOIP. Otd. biol. 66 no.3:149-
150 My-Je '61.   (MIRA 14:6)
            (BROME GRASS)   (QUACK GRASS)
                (BOTANY--MORPHOLOGY)

SHCHIBRYA, G.G.; MOROZOV, N.M.; TEMKIN, M.I.

Kinetics and mechanism of catalytic reaction between carbon
monoxide and water vapor. Part 1: Reaction on ferrochromium
oxide catalyst. Kin. i kat. 6 no. 6:1057-1068 N-D '65
(MIRA 19:1)

1. Fiziko-khimicheskiy institut imeni Karpova. Submitted
February 13, 1965.

SHCHIBRYA, G.G.; MOROZOV, N.M.; TEMKIN, M.I.

Kinetics and mechanism of a catalytic reaction between carbon
monoxide and water vapor. Part 2: Reaction on a zinc-chromium
copper oxide catalyst. Kin. i kat. 6 no. 6:1115-1117 N-D '65
(MIRA 19:1)

1. Fiziko-khimicheskiy institut imeni Karpova. Submitted
February 13, 1965.

BRESLAVETS, L.P.; BEREZINA, N.M.; SHCHIBRYA, G.I.

Effect on certain agricultural plants of prolonged irradiation with
small doses of gamma rays. Biofizika 1 no.6:555-563 '56. (MLRA 10:1)

1. Institut biologicheskoy fiziki Akademii nauk SSSR, Moskva.
    (GAMMA RAYS--PHYSIOLOGICAL EFFECT)
    (PLANTS, EFFECT OF RADIATION ON)

BRESLAVETS, L.P.; BEREZINA, N.M.; SHCHIBRYA, G.I.; ROMANCHIKOV, M.L.

Effect of ionizin g radiations on the growth and development of certain agricultural plants. Biofizika 1 no.7:628-632 '56.

(MLRA 9:12)

1. Institut biologicheskoy fiziki Akademii nauk SSSR, Moskva.
(PLANTS, EFFECT OF RADIATION ON)

SHCHIBRYA, G.I.

Pretreatment and supplementary nutrition for seeds as a factor
in raising carrot yields. Trudy VNIVI 6:180-184 '59.

(MIRA 13:7)

1. Sel'skokhozyaystvennyy otdel Vsesoyuznogo nauchno-issledo-
vatel'skogo vitaminnogo instituta.

(SEEDS)   (CARROTS)   (POTASSIUM BROMIDE)

SHCHIBRYA, G.I.; YAZYKOVA, V.A.; BRESLAVETS, L.P.; BEREZINA, I.M.

Action of ionizing radiation on some vitamin-bearing plants.
Trudy VNIVI 6:184-189 '59.   (MIRA 13:7)

1. TSentral'naya biologicheskaya stantsiya Vsesoyuznogo nauchno-
issledovatel'skogo vitaminnogo instituta.
              (PLANTS, EFFECT OF RADIOACTIVITY ON)

BRESLAVETS, L.P.; BEREZINA, N.M.; SHCHIBRYA, G.I.; ROMANCHIKOVA, M.L.;
YAZYKOVA, V.A.; MILESHKO, Z.F.

Inreasing the yield of radishes and carrots by irradiating seeds
with gamma and X rays before sowing. Biofizika 5 no.1:81 '60.
(MIRA 13:6)
(RADISH)   (CARROTS) (PLANTS, EFFECT OF RADIATION ON)

BEREZINA, N.M.; SHCHIBRYA, G.I.; ROMANCHIKOVA, M.L.

Results of irradiating seeds of Rubin radishes under conditions of
hotbed culture. Radiobiologiia 1 no.3:461-462 '61. (MIRA 14:10)

1. Institut biologicheskoy fiziki AN SSSR, Moskva
(PLANTS, EFFECT OF GAMMA RAYS ON) (SEEDS)

SHCHIBRYA, G.I.; BEREZINA, N.M.; PERETOKIN, I.V.; YAZYKOVA, V.A. [deceased]

Increasing the yield and vitamin content of strawberries following cultivation of planting material in a gamma field. Trudy VNIVI 8:86-89 '61.   (MIRA 14:9)

1. Sel'skokhozyaystvennyy otdel Vsesoyuznogo nauchno-issledovatel'-skogo vitaminnogo instituta.
   (Strawberries) (Plants, Effect of radioactivity on)

BEREZINA, N.M.; SHCHIBRIA, G.I.; DROZHZHINA, V.V.; RIZA-ZADE, R.R.;
TARASOVA, A.D.

Effect of Co^{60} gamma irradiation of tubers before planting on
the yield and vitamin C content of potatoes. Radiobiologiia
3 no.1:139-142 '63.

(MIRA 16:2)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
     (PLANTS, EFFECT OF GAMMA RAYS ON)   (POTATOES)
                    (ASCORBIC ACID)

SHCHIBRAYEV, E. V., and KUDRYASHEV, L. I.

"Heat and Transfer at a Jet Flow Round Bodies."

Report submitted for the Conference on Heat and Mass Transfer,
Minsk, BSSR, June 1961.

S/124/62/000/010/011/015
D234/D308

AUTHORS: Kudryashev, L. I. and Shchibrayev, Ye. V.

TITLE: Application of the generalized theory of thermal re-
             gularity to the determination of the heat loss coef-
             ficient of complex bodies in air streams

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 10, 1962, 97, ab-
             stract 10B603 (Tr. Kuybyshevsk. aviats. in-t, 1961,
             no. 12, 83-92)

TEXT: The authors give an analytical proof of the existence of
thermal regularity for a multilayer cylinder whose thermal conduc-
tivity and heat loss coefficients depend on temperature. Without
corresponding specifications, the authors take the equations for
a multilayer plate instead of those for a cylinder. Theoretical
results are compared with experimental data in an example. /¯Ab-
stracter's note: Complete translation._/

Card 1/1

SHCHICHENKOV, M.V.

Effect of fluid extracts of the roots of ginseng and Eleuthero-
coccus on dark adaptation and visual acuity. Mat. k izuch. zhen'.
i drug. lek. rast. Dal'. Vost. no.5:241-244 '63.   (MIRA 17:8)

1. Dal'nevostochnyy filial imeni Komarova Sibirskogo otdeleniya
AN SSSR.

SHCHICHENKOV, V. V.

Works of the Central Peat Experimental Station, (Min of Agri. RSFSR)

   Volume III, 1936, 87 pages, "Peat in Vegetable". by Shchichenkov, V. V.

SO: Botanicheskiy Zhurnal, Vol XXXV, No 1, pp 100-110,
     Jan-Feb 1950, Russian bimonther, Moscow/Leningrad (U-5511,
     12 Feb 1954)

ALIMKIN, N.I.; SHCHICHILIN, K.I.

Beaches and marinas. Gor.khoz.Mosk. 34 no.6:15-18 Je '60.
(MIRA 13:7)

1. Zamestitel' nachal'nika Upravleniya bytovogo i kommunal'nogo
obsluzhivaniya (for Alimkin). 2. Nachal'nik otdela ekspluatatsii
Upravleniya bytovogo i kommunal'nogo obsluzhivaniya (for Shchuchilin).
(Moscow region--Bathing beaches)
(Moscow region--Marinas)

L 52153-65   EWA(h)/EWP(k)/EWT(d)/EWT(l)/EWT(m)/EWP(h)/EWP(b)/T/EWA(d)/EWP(l)/
EWP(v)/EWP(t)   Pf-4/Pi-4/Peb   JD

ACCESSION NR: AP5015549   UR/0286/65/000/008/0087/0087

AUTHORS: Sviridov, A. P.; Shchichilin, V. M.

TITLE: A device for machining with ultrasound. /Class 49, No. 170272   36

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 8, 1965, 87   B

TOPIC TAGS: ultrasound, magnetostriction oscillator, abrasive

ABSTRACT: This Author Certificate presents a device for machining with ultrasound
(see Fig. 1 on the Enclosure). The device contains a magnetostrictive converter,
working tables, and feeding systems for the abrasive suspension. To increase its
productivity, the magnetostrictive converter is provided with two concentrators, one
at each of its ends. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 22Aug62   ENCL: 01   SUB CODE: IE

NO REF SOV: 000   OTHER: 000
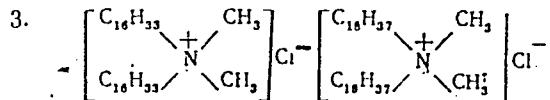
Card 1/2

SHCHICHKO, V. S.

Cand Agr Sci - (diss) "Crops of Crimean pine under conditions of
mountainous Crimea." Kiev, 1961. 24 pp; (Ministry of Agriculture
Ukrainian SSR, Ukr Academy of Agr Sci); 150 copies; price not given;
(KL, 7-61 sup, 253)

Use of activated diatomite ...

alcohol and methanol; 3)

3.

$$\left[\begin{array}{c} C_{16}H_{33} \quad \quad CH_3 \\ \backslash \overset{+}{N} / \\ C_{16}H_{33} / \quad \backslash CH_3 \end{array}\right] Cl^- \left[\begin{array}{c} C_{18}H_{37} \quad \quad CH_3 \\ \backslash \overset{+}{N} / \\ C_{18}H_{37} / \quad \backslash CH_3 \end{array}\right] Cl^-$$

(Arquade-2HT), a yellow substance melting at 69-70°C, and soluble
in benzene and dichloroethane; 4) $C_{17}H_{33}CONH_2$ (Armide-O), a white
waxy substance insoluble in water but soluble in organic solvents,
melting at 68-69°C. The experimental results are given in Table 2.
A second set of experiments was conducted by mixing the amines di-
rectly into the raw rubber preparation. The results obtained showed
a considerable improvement in the tensile strength of the rubber
and twofold acceleration in reaction time. Comparison of results
shows that the activity of the amines deposited on the diatomite is
less than the activity of the directly admixed amines. The reduced
activity in the case of the activated diatomites can be explained

Card 2/4

Use of activated diatomite ...

S/021/61/000/004/012/013
D213/D303

by the elementary structure of the diatomite and the active addi-
tive. Apparently one of the amino groups of these compounds combi-
nes with the structure of the diatomite, thus reducing the availa-
bility of these groups for the formation of aminopolysulphide com-
plexes which on decomposition produce active sulphur. The greater
activity of the directly admixed amines is, therefore, simply ex-
plained by the greater concentration of the active amines which
also help to accelerate the reaction. The action of the amines is
to give the diatomite surface a greater affinity for the rubber.
This tends to distribute the diatomite better through the mass of
the rubber thus further increasing its strength. There are 3 ta-
bles and 3 Soviet-bloc references.

ASSOCIATION: Instytut zahal'noyi ta neorhanichnoyi khimiyi AN URSR,
Dnipropetrovs'kyy khimiko-tekhnolohichnyy instytut
(Institute of General and Inorganic Chemistry, AS
UkrSSR, Dnipropetrovsk Institute of Industrial Che-
mistry)

SUBMITTED: December 26, 1960
Card 3/4

BLIKH, G.A.; SHCHICHKO, Z.V.

Amine-containing organic accelerators of rubber vulcanization.
Kauch.i rez. 21 no.7:11-15 Jl '62.   (MIRA 15:7)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni F.E.
Dzerhinskogo.
              (Vulcanization)

SHCHICHKO, Z.V. [Shchychko, Z.V.]; SIMAKOVA, E.P. [Symakova, E.P.];
BOGUSLAVSKIY, D.B. [Bohuslavs'kyi, D.B.]; BLOKH, G.A. [Blokh,
H.A.], doktor khim. nauk; PIVOVAROVA, Yu.V. [Pyvovarova, IU.V.];
BOROLUSHKINA, Kh.N.

Increasing the strength of the bonds between the elements of
automobile tires. Khim. prom. no.4:21-22 O-D '64.
                                                (MIRA 18:3)

MUZYLEV, B.T., inzh.; SHCHIDAREV-VITKOVSKIY, G.V., inzh.

Noncontact proportioning circuit. Mekh.i avtom.proizv. 18
no.3:25-26 Mr '64.   (MIRA 17:4)

Category : USSR/Electronics - Semiconductor Devices and Photoelements   H-8

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4368

Author   : Shchigal', F.A., Madoyan, S.G., Petrov, L.A., Gol'denberg, V.A.,
           Lazareva, G.V., Stepanenko, I.P., Shuyskiy, L.I.
Title   : Germanium Diodes and Transistors and their Application

Orig Pub : Radiotekhn. proiz-vo. Sb. I. M., 1956, 3-25

Abstract : Popular article

Card   : 1/1

SHCHIGEL', A.M., inzhener.

Europe's power problems.   Gidr.stroi. 26 no.6: 55-56 Je '57.
(MIRA 10:7)

(Europe—Electric power)

POVIDAYLO, V.A.; SHCHIGEL', V.A.

Vibratory tray conveyor. Mashinostroitel' no.12:7 D '63.
(MIRA 17:1)

POVIDAYLO, Vladimir Aleksandrovich; SILIN, Radomir Ivanovich;
    SHCHIGEL', Viktor Abramovich; KOMAROV, M.S., doktor tekhn.
    nauk, red. vypuska; FURER, P.Ya., red.; GORNOSTAYPOL'SKAYA, M.S.,
    tekhn. red.

    [Vibratory devices in the manufacture of machinery] Vibratsionnye
    ustroistva v mashinostroenii. Moskva, Mashgiz, 1962. 109 p.
                                                    (MIRA 15:6)
        (Machinery industry)   (Vibrators)

POVIDAYLO, V.A., kand. tekhn. nauk; SHCHIGEL', V.A., inzh.

Vibratory screw hoist. Mekh. i avtom. proizv. 17 no.8:
41-42 Ag '63.   (MIRA 16:10)

GAVRILOVICH, Mikhail Al'bertovich, dotsent,.kand.med.nauk; SAYET, Aleksandr Gavrilovich, assistent; SHCHIGEL'SKIY, Vyacheslav Ivanovich, assistent; MOGILEVCHIK, Z.K., prof., nauchnyy red.; SHEVLAK, V.A., red.; ZIMA, Ye.G., tekhred.

[Hygiene for school children; collection from the series, "What one must know about the training of children."] Gigiena detei shkol'nogo vozrasta; sbornik iz tsikla "Chto nuzhno znat' o vospitanii detei." Minsk, 1960. 38 p. (Obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii Belorusskoi SSR, no.24).
(MIRA 14:1)

1. Kafedra gigiyeny Minskogo meditsinskogo instituta (for Sayet, Shchigel'skiy). 2. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for Mogilevchik).
(CHILDREN--CARE AND HYGIENE)

SHIROKOVSKIY, R.M.; SHCHIGEL'SKIY, V.M.

Induction transducer of displacement with linear scale. Avtom.
svar. 15 no.3:84-85 Mr '62.   (MIRA 15:2)

1. Ordena Trudovogo Krasnogo Znameni institut elektrosvarki
imeni Ye.O. Patona AN USSR.
                        (Electric welding)
                        (Automatic control)

BOGDANOVA, K.G.; POLEVAYA, N.I.; SHCHIGLEV, A.B.

Absolute age of granitoids in the southwestern Altai. Inform.sbor.
VSEGEI no.54:83-94 '62.   (MIRA 17:1)

SHCHIGLOVSKAYA V. I.

COUNTRY   :
CATEGORY   :

ABS. JOUR. : RZBiol., No. 19 1958, No.

AUTHOR   :
INST.   :
TITLE   :

ORIG. PUB. :

ABSTRACT   :

CARD: 1/1

COUNTRY	:	USSR
CATEGORY	:	Cultivated Plants. Fruits. Berries.

ABS. JOUR. : RZhBiol., No. 23   1958 No. 104823

AUTHOR : Mel'nik, S. A., Shchiglovskaya, V. I.
INST. : Odessa Agricultural Institute
TITLE : Ampelometric Method of the Determination of the Leaf Surface Area in Grapevine.

ORIG. PUB. : Tr. Odessk. s.-kh. in-ta, 1957, 8, 82-88

ABSTRACT : A method, called by the authors ampelometric, is proposed for the determination of grapevine leaf area without plucking leaves off the vine. In this method, the dia- meter of each leaf on each shoot is determined success- ively from the base to the tip. The diameter of the leaf is taken to be the distance in longitudinal direction from the farthest projecting tooth of the lower lobe to the tip of the central tooth of the upper terminal lobe. For

CARD: 1/2

137

DOROKHOV, B.A., red.; ZAKHAREVICH, B.G., red.; IVANOV, A.S., red.; SEMENOV, S.M., red.; CHIKOV,Ye.I., red.; SHCHIGLOVSKIY, B.M., red.

[Catalog of standard estimates for construction work at prices set as of July 1, 1955, for buildings of the second group administered by the Ministry of the Lumber Industry of the U.S.S.R., located in Altai Territory, Kemerovo, Novosibirsk, Omsk and Tomsk provinces and Tyumen Province (south of the 64th parallel), the 18th territorial district of the U.S.S.R.] Katalog edinichnykh rastsenok na stroi- tel'nye raboty v tsenakh, vvedennykh s 1 iiulia 1955 goda dlia stroek vtoroi gruppy Ministerstva lesnoi promyshlennosti SSSR, raspolozhennykh v Altaiskom krae, Kemerovskoi, Novosibirskoi, Omskoi, Tomskoi oblastiakh i Tiumenskoi oblasti (iuzhnee 64 paralleli) 18-go terri- torial'nogo raiona Soiuza SSR. Leningrad. Book 1. 1957. 111 p. Book 2. 1957. 107 p. Book 3. 1957. 139 p.   (MIRA 10:12)

1. Russia (1923- U.S.S.R.) Upravleniye kapital'nogo stroitel'stva.
                (Building--Estimates)

DOROKHOV, B.A., red.; ZAKHAREVICH, B.G., red.; IVANOV, A.S., red.;
    SEMENOV, S.M., red.; CHIKOV, Ya.I., red.; SHCHIGLOVSKIY, B.M., red.

[Technical section for catalogs of uniform estimates of construction
work and costs, in effect as of July 1, 1955, for structures of the
second group of the Ministry of the Lumber Industry of the U.S.S.R.;
for all territorial districts] Tekhnicheskaia chast' k katalogam
edinichnykh rastsenok na stroitel'nye raboty v tsenakh, vvedennykh
s 1 iiulia 1955 goda dlia stroek vtoroi gruppy Ministerstva lesnoi
promyshlennosti SSSR (dlia vsekh territorial'nykh raionov). Leningrad,
1957. 222 p.   (MIRA 10:12)

1. Russia (1923-   U.S.S.R.) Ministerstvo lesnoy promyshlennosti.
Upravleniye kapital'nogo stroitel'stva.
                (Construction industry--Costs)

L 18322-63   EWT(m)/BDS   ESD-3   RH
ACCESSION NR: AP3004967   S/0076/63/037/008/1689/169.3

AUTHORS: Iossel, Yu. Ya.; Shchiglovskiy, K. B. (Leningrad)   54

TITLE: Analysis of multi-electrode galvanic systems by means
of equivalent electrical circuits

SOURCE: Zhurnal fiz. khimii, v. 37, no. 8, 1963, 1689-1693

TOPIC TAGS: corrosion, multi-electrode galvanic system,
equivalent electrical system, double electrical layer,
electrolyte-metal juncture

ABSTRACT: Authors analyzed a multi-electrode galvanic system in
order to learn something about its corrosion-producing properties.
The current path in a galvanic system proceeds through the
electrolyte and metal, and the function of both links of the path
is the source of e.m.f. since the charged double electrical layer
also originates here. The difference between potentials of the
electrolyte and metal is equal to the difference of the electrode
potential of the metal and some function of current representing

Card   1/4   _____

L 18322-63
ACCESSION NR: AP3004967

the polarization. Hence, the double electrical layer can be
represented by the source of e.m.f., the direction and magnitude
of which is determined by the electrode potential of the metal
having an electronic resistance $R_1 = (1/I)f(I)$. It is possible to
represent the elemental segment of the galvanic system in Figure 1
of the enclosure by the equivalent electrical circuit shown in
Figure 2 of the enclosure. Any galvanic system can be represented
through an equivalent electrical circuit by replacing the actual
cells with centralized e.m.f. sources and also by linear and non-
linear resistances. The method of connection of the cells depends
upon current distribution in the real system. The introduction of
an equivalent circuit makes it possible to investigate a multi-
electrode system on its model. Orig. art. has: 6 figures.

ASSOCIATION: none

SUBMITTED: 29Dec60   DATE ACQ: 06Sep63   ENCL: 02
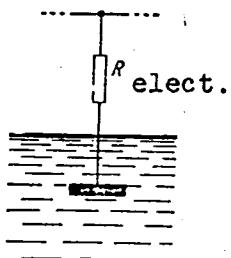
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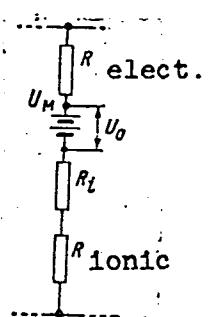
Card   2/4

L 18322-63
ACCESSION NR: AP3004967

ENCLOSURE: 01

R elect.

Card 3/4

L 18322-63
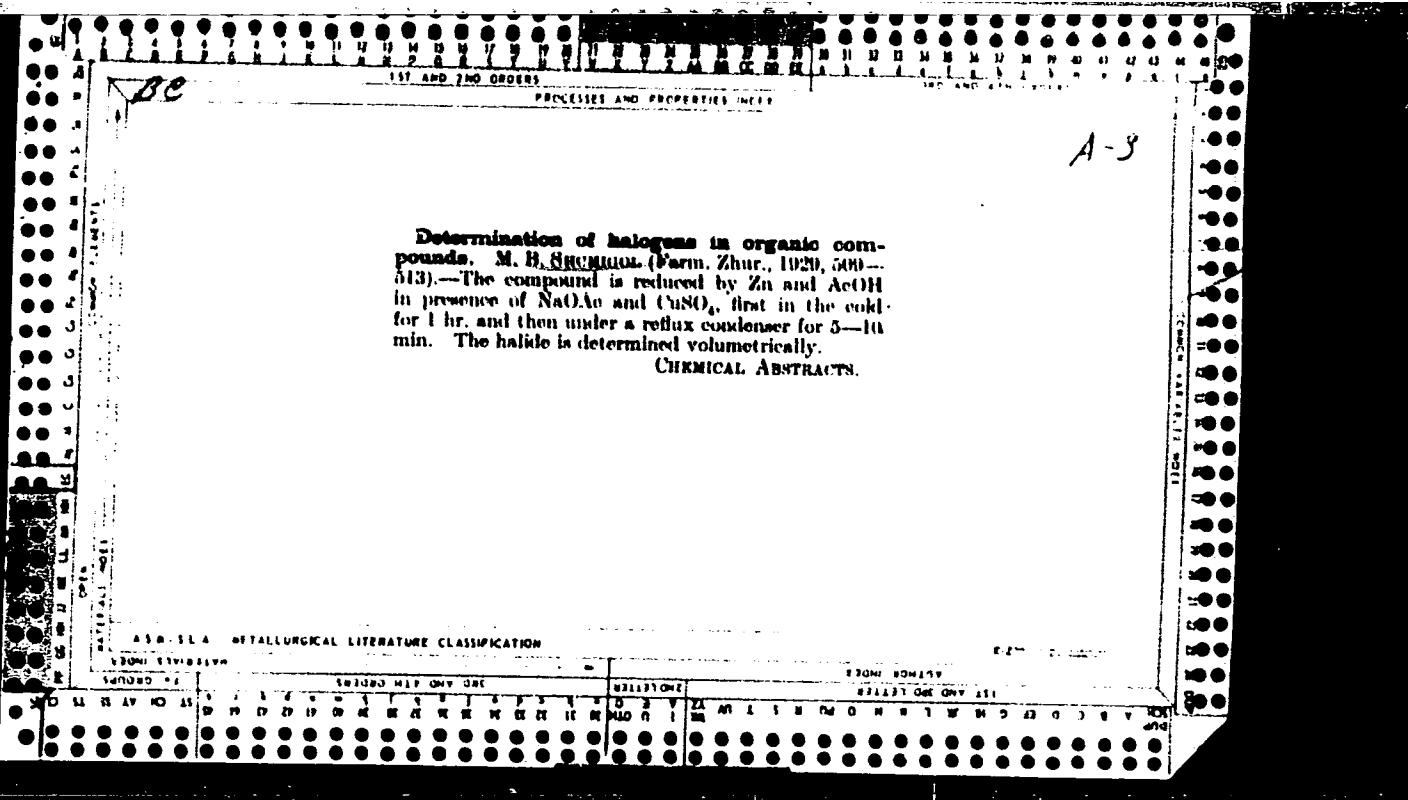ACCESSION NR: AP3004967   ENCLOSURE: 02

R elect.

U_M U_0

R_l

R ionic

U_M - potential of metal.

U_O - electrode potential of metal.

$R_l = (1/I)f(I)$

Card 4/4

A-3

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Determination of halogens in organic compounds. M. B. Shemilov. (Farm. Zhur., 1929, 500—513).—The compound is reduced by Zn and AcOH in presence of NaOAc and CuSO$_4$, first in the cold for 1 hr. and then under a reflux condenser for 5—10 min. The halide is determined volumetrically.

CHEMICAL ABSTRACTS.

A.S.M-S.L.A   METALLURGICAL LITERATURE CLASSIFICATION

Determination of chloroform. M. SCHTSCHIGOL.
(Khim. Farm. Prom., 1933, 150—151).—10 drops of
$CHCl_3$ in 5 c.c. of PhMe are treated for 2 hr. with
0·5N.-EtOH–KOH; after dilution and acidification
with HNO_3 the Cl' is determined by Volhard's method.

Ch. Abs.

METALLURGICAL LITERATURE CLASSIFICATION

Determination of chloride ion in presence of bromide and iodide ions. M. Schtschiigol. (J. Gen. Chem. Russ., 1933, 3, 840–843.)—Cl' is determined by the ordinary methods in 10 c.c. of a 2% solution of the substance, total halides are determined in a second 10-c.c. portion, and Cl' is determined in a third portion by adding 35—40 c.c. of 2% aq. NH₃ and sufficient AgNO₃ to ppt. total halides, when AgBr and AgI are pptd. Ag is pptd. from the filtrate as AgₓAsO₄, from which Ag is separated by the action of aq. Na₂CO₃, the Ag is dissolved in HNO₃, and determined by Volhard's method.

R. T.

METALLURGICAL LITERATURE CLASSIFICATION

BC

PROCESSES AND PROPERTIES INDEX

Detection of mercury in presence of all the cations. M. Sarmousakos (Khim. Prom., 1934, No. 1, 44—45).—The sample is treated with excess of 10% KI and 30% NaOH, heated, and filtered. The filtrate containing K₂HgI₄ is treated with 1 c.c. of glycerol and 2—3 c.c. of aq. NaOH, and boiled for several min. Darkening of the solution or a black ppt. indicates Hg.   Cɪɪ. Abs. (e)

METALLURGICAL LITERATURE CLASSIFICATION

BC

Volumetric determination of mercury. M. Scannechool. (Khim. Farm. Prom., 1934, No. 3, 29—33).—0·2—0·4 g. of the sample is dissolved in H_2O and 20—30 c.c. of 30% NaOH, treated with 5—10 c.c. of glycerol, and filtered. The ppt. is washed and dissolved in 15 c.c. of hot HNO_3. The solution is diluted, $KMnO_4$ being added until pink and then $FeSO_4$ until colourless, and titrated with 0·1 N. NH_4CNS. Cn. Abs. (e)

Detection of zinc. M. Shchigol. *J. Applied Chem*
(U. S. S. R.) 7, 1285-7(1934).—The test recommended
depends upon the fact that Zn^{++} forms a sol. zincate
ion when treated with NaOH in excess and a sol. $Zn(NH_3)_6^{++}$ ion with excess NH_4OH. In this way Zn^{++}
and granulated Sn, heat to beginning reaction, decant the
liquid and wash the Sn 7-8 times with H_2O. Add then 1
cc. H_2O and 0.5 cc. concd. HNO_3, boil for 1-1.5 min.,
dil. with H_2O and decant the milky liquid from the remain-
ing Sn into another test tube. Add 0.2 cc. of a satd. soln.
of NaF (to form the complex ion FeF_6), add 0.2 g. $ZnSO_4$
and 0.3 cc. of a soln. of Hg NH_4 thiocyanate and agitate
vigorously. Cu is indicated by the sepn. of a violet-
reddish ppt. of $ZnHg(CNS)_4 \cdot CuHg(CNS)_4$ adsorbed on
$ZnHg(CNS)_4$. Should Ag and mercurous ions be present,
then the corresponding chlorides are pptd. during the HCl
introduction. If, however, mercuric ions are also present,
they are converted into $HgCl$ by adding an HCl soln. of
$SnCl_2$ and filtering. The filtrate is then treated as above.
This method permits sepn. of Co salts in the presence of
0.001% Cu.   A. A. Boehtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Fractional reaction for mercury. M. Scaracchi-
ol. (J. Appl. Chim. Russ., 1936, 9, 195—199).—
An equal vol. of 10% KI is added to the solution,
followed by 30% aq. KOH, and the mixture is heated
and filtered. 1 ml. of glycerol and 2—3 ml. of aq.
NaOH are added to the filtrate, and the mixture is
boiled for several min. When a black ppt. of Hg forms,
or, in presence of very small amounts of Hg, the
liquid darkens, only 0.05—0.25 mg. of Hg can be
detected in presence of other ions.
R. T.

A S M — S L A   METALLURGICAL LITERATURE CLASSIFICATION

New method for a volumetric determination of mercury
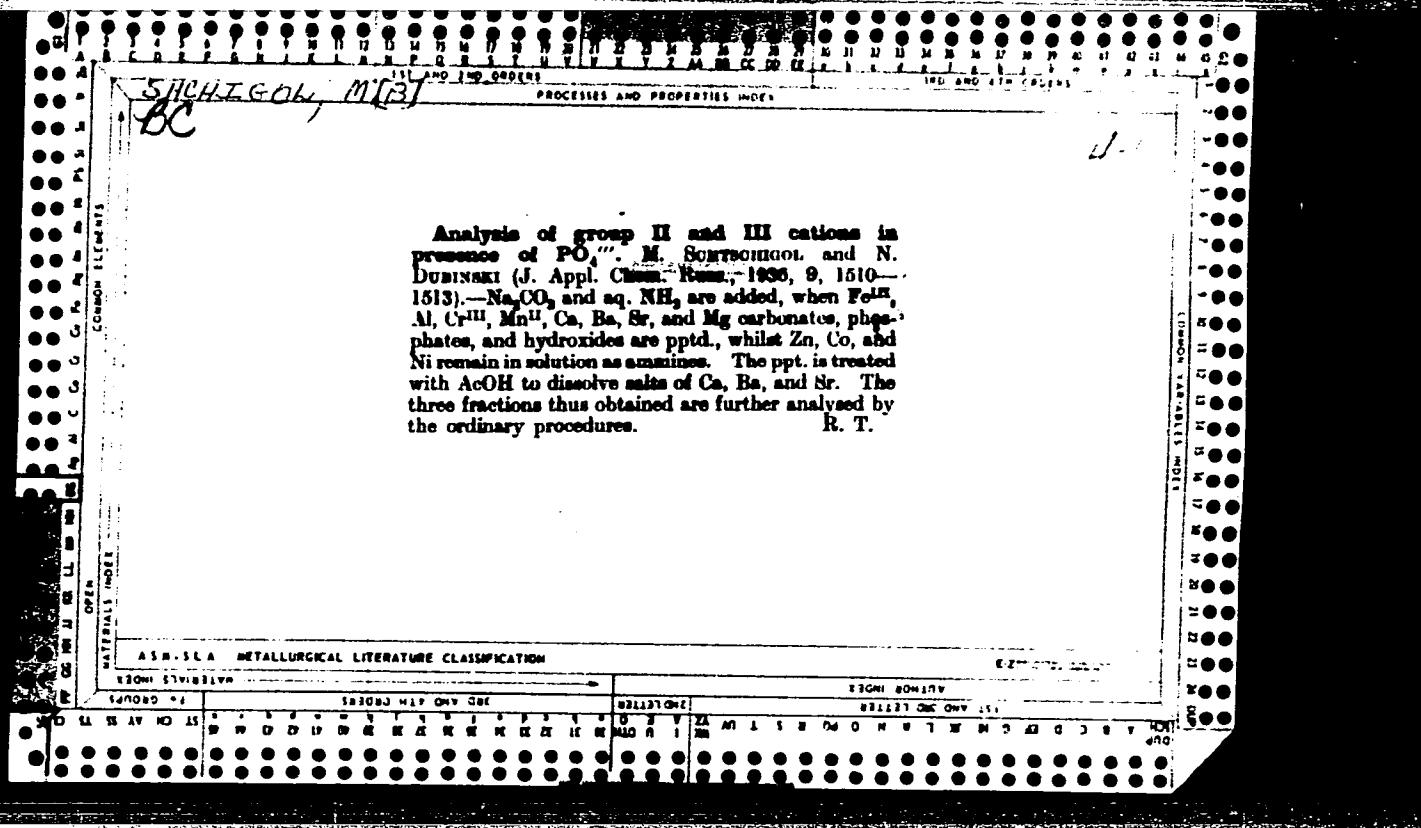
ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

Mercurometry [Determination of halides M. Shchigol. *J. Applied Chem.* (U.S.S.R.) 9, 946-9 (in French 949)(1936); cf. *C. A.* 30, 5528. The detn. of halides with $HgNO_3$ is based on the general reaction: $Hg(NO_3)_2 + 2KX \rightarrow HgX_2 + 2KNO_3$ (X = halogen). To prep. 0.1 N $HgNO_3$, dissolve 30 g. $Hg_2(NO_3)_2.2H_2O$ in 1 l. of about 0.2 N HNO_3 and store over Hg. To 25 cc. of 0.1 N HCl or NaCl add 0.05 N NH_4SCN and 2-3 cc. of concd. $Fe(NO_3)_3$ (formation of $Fe(SCN)_3$), and titrate with the $HgNO_3$ soln. to a complete decolorization. Det. by a blank titration the amt. of $HgNO_3$ consumed in the titration of the indicator. Use a similar procedure in the detn. of chlorides and bromides. In the reaction of $Hg^{..}$ salts with (SCN) half the Hg is converted to $[Hg(SCN)_2]$ and the other half is pptd. as metallic Hg. The resulting black discoloration of the soln. interferes with the titration. Hence for the standardization of the NH_4SCN soln. and the detn. of iodides (KI) by the method of residue $Hg^{..}$ is preliminary oxidized with $KMnO_4$ in HNO_3 to $Hg^{..}$. To prep. the NH_4SCN soln., add to 25 cc. of 0.1 N $HgNO_3$, 5 cc. of dil. HNO_3, follow with a dropwise addn. of satd. $KMnO_4$ to a stable rose and with $FeSO_4$ soln. to decolorization. Titrate the cold soln. with the NH_4SCN soln. To det. I, dissolve a sample (KI) in H_2O to obtain 100 cc. of about 0.1 N soln. To 25 cc. of the soln. add 50 cc. of 0.1 N $HgNO_3$ and filter. Wash the flask and the ppt. on the filter 4-5 times with water contg. 1-2 drops of dil. HNO_3. Treat the united wash waters and filtrate contg. the excess $HgNO_3$ soln. with 2-3 drops of dil. HNO_3, oxidize with $KMnO_4$ to a rose and decolorize the soln. with $FeSO_4$ soln. Titrate the $Hg(NO_3)_2$ with the standard NH_4SCN soln. to a faint rose, and calc. by the difference the amt. of $HgNO_3$ used in combining with the I ion. The detns. are accurate to 0.03%.   C. B.

SHCHIGOL, M[B]
BC

PROCESSES AND PROPERTIES INDEX

Analysis of group II and III cations in presence of PO_4'''. M. Sohrraoinaol. and N. Dubinski (J. Appl. Chem. Russ., 1936, 9, 1510—1513).—Na_2CO_3 and aq. NH_3 are added, when Fe^{III}, Al, Cr^{III}, Mn^{II}, Ca, Ba, Sr, and Mg carbonates, phosphates, and hydroxides are pptd., whilst Zn, Co, and Ni remain in solution as ammines. The ppt. is treated with AcOH to dissolve salts of Ca, Ba, and Sr. The three fractions thus obtained are further analysed by the ordinary procedures.   R. T.

A S B . S L A   METALLURGICAL LITERATURE CLASSIFICATION

Mercurometry. II. The action of ammonium hydroxide on mercuric and mercurous chlorides. M. B. Shchigol'. *J. Applied Chem.* (U. S. S. R.) 9, 1525-28 (in French 1528)(1936); cf. C. A. 30, 7492². The reaction between Hg_2Cl_2 and NH_4OH proceeds as follows: $2Hg_2Cl_2 + 4NH_4OH = (Hg + Hg_2O + HgNH_2Cl) + 3H_2O + 3NH_4Cl$ and during boiling $Hg_2O \rightleftharpoons Hg + HgO$. On the basis of this reaction the following method for the detn. of Hg_2Cl_2 was worked out. Boil a mixt. of 0.3-0.4 g of Hg_2Cl_2 and 25-40 cc. of 3 N NH_4OH for 5-10 min., filter, wash all chlorides from the filter, acidify the filtrate with HNO_3 and titrate the NH_4Cl formed with 0.1 N $HgNO_3$ in the presence of $Fe(CNS)_3$ ($Fe(NO_3)_3$, about 3 cc., and 0.05 N NH_4CNS 1 cc.) to complete disappearance of color. To det. $HgCl_2$, mix 20 cc. of 0.1 N $HgCl_2$ with 25 cc. of 3 N NH_4OH and dil. to 100 cc., filter, disregarding the first 20 cc. Acidify the filtrate and titrate as in the above detn. Eleven references.   A. A. P.

BC

A-1

Zinc sulphide as a reagent for fractional detection of mercury, copper, and cadmium. M. Schtscheglol (J. Appl. Chem. Russ., 1937, 10, 1644—1645).—An equal vol. of 10% KI is added to the solution, followed by 20% NaOH + Na$_2$CO$_3$ to a strongly alkaline reaction, and the solution is boiled and filtered, and the filtrate heated with ZnS; a black ppt. of HgS forms. The ppt. is boiled with (NH$_4$)$_2$SO$_4$ in aq. NH$_3$. the solution is filtered, and the filtrate is warmed with ZnS; a brown ppt. indicates Cu. A second portion of filtrate is decolorised with KCN, and ZnS is added; a yellow ppt. indicates CdS.

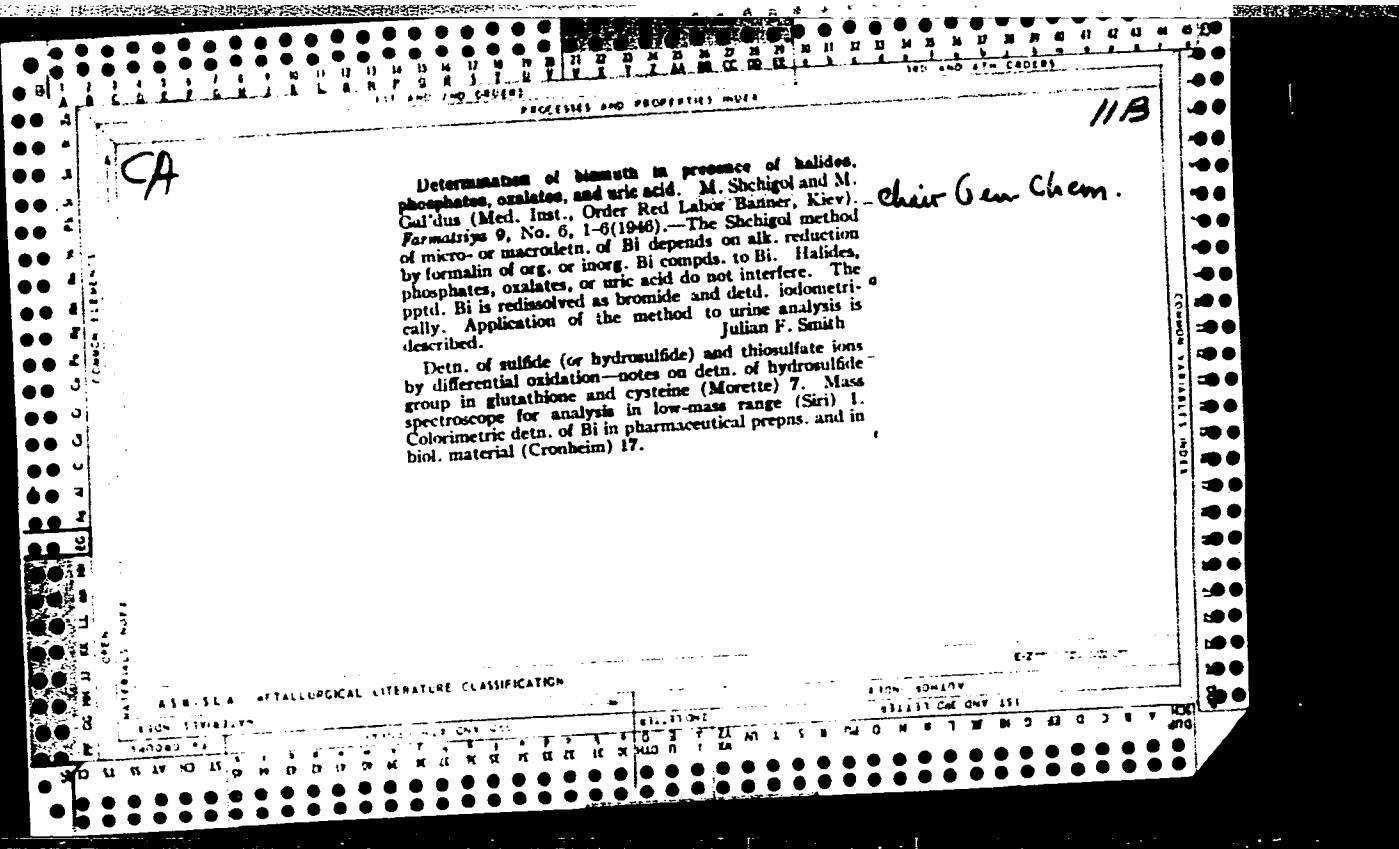R. T.

A S B - S L A   METALLURGICAL LITERATURE CLASSIFICATION

Determination of halogens. M. B. Schtschigol (*Zavod. Lab.*, 1940, 9, 310—313).—The solution containing Cl', Br', and I' is divided into three parts. In (*a*) all three halogens are exactly pptd. using Q mols. of AgNO₃. In (*b*) I is determined by adding HMnO₄ and starch and titrating with AgNO₃. (*c*) is mixed with aq. NH₃ (final [NH₃] ~ 0·5n.) and with Q mols. of AgNO₃; AgI and AgBr are pptd., but Ag(NH₃)₂Cl remains in solution and is determined in the filtrate.   J. J. B.

PROCESSES AND PROPERTIES

Sensitive test for bismuth ion. M. B. Shchigol. Zhur. Anal. Khim. 1, 339-1(1946). —This test is based on the reaction $2Bi^{+++} + 3CH_2O + 6OH^- \rightarrow 3HCOOH + 2Bi + 3H_2O$. To 3-4 drops of the unknown soln. add 5-6 drops of CH_2O soln. and a like vol. of 2 N NaOH. Shake and heat. A black ppt. or darkening of the soln. indicates the presence of Bi. In the presence of interfering ions, it is recommended to ppt. the Bi as phosphate from a soln. which is slightly acidic with HNO_3 and convert the Bi into Bi^{+++} by washing the ppt. with a satd. soln. of alum. M. Hosch

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A.S.M. - S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

CA

chair Gen Chem.

//B

Determination of bismuth in presence of halides, phosphates, oxalates, and uric acid. M. Shchigol and M. Gul'dus (Med. Inst., Order Red Labor Banner, Kiev). *Farmatsiya* 9, No. 6, 1-6(1946).—The Shchigol method of micro- or macrodetn. of Bi depends on alk. reduction by formalin of org. or inorg. Bi compds. to Bi. Halides, phosphates, oxalates, or uric acid do not interfere. The pptd. Bi is redissolved as bromide and detd. iodometrically. Application of the method to urine analysis is described.   Julian F. Smith

Detn. of sulfide (or hydrosulfide) and thiosulfate ions by differential oxidation—notes on detn. of hydrosulfide group in glutathione and cysteine (Morette) 7. Mass spectroscope for analysis in low-mass range (Siri) 1. Colorimetric detn. of Bi in pharmaceutical prepns. and in biol. material (Cronheim) 17.

PROCESSES AND PROPERTIES INDEX

W. I. man

Determination of permanganate and manganate ions when present together. M. B. Shchigol and N. B. Burchinskaya *Zhur. Anal. Khim.* 2, 350 (K)(1947). To 10 ml. of approx. *N* solns. contg. MnO_4 and MnO_4 add 2.5 ml. of 2 *N* NaOH and 20 ml. of 0.5 *N* KI. The reaction $8MnO_4^- + I^- + 8OH^- \rightarrow 8MnO_4^{--} + IO_3^- + 3H_2O$ takes place. Add dropwise, while shaking, approx. 0.1 *N* soln. of Mohr's salt until all the MnO_4^- originally present and that formed by the above reaction is reduced to MnO_4. Dil. the mixt. to exactly 100 ml., shake, and filter. To a 20 ml. aliquot add 10 ml. of 8 *N* H_2SO_4 and 20 ml. of water; after 10 min. in the dark titrate the I formed by the reaction $IO_3^- + 5I^- + 6H^+ \rightarrow 3I_2 + 3H_2O$ with $Na_2S_2O_3$. To another aliquot of the original soln. add 20 ml. of 0.5 *N* KI and 10 ml. of 8 *N* H_2SO_4, titrate the I_2 former with $Na_2S_2O_3$. $2MnO_4^- + 10I^- + 16H^+ \rightarrow 2Mn^{++} + 5I_2 + 8H_2O$. $MnO_4^{--} + 4I^- + 8H^+ \rightarrow Mn^{++} + 2I_2 + 4H_2O$.   M. Hosch

A S a - S L A   METALLURGICAL LITERATURE CLASSIFICATION

15

•148. A New Method for Quantitative Determination of Permanganate and Manganate Ions in Their Simultaneous Presence. (In Russian.) M. B. Shchigol' and N. H. Burchinakaia. Zavodskaia Laboratoriya (Factory Laboratory), v. 13, Sept. 1947, p. 1048-1050. Presents data on the quantitative reduction of permanganate to manganate in alkaline medium by thiocyanate ion. The rate of the reaction depends on the concentration of thiosulfate. Describes development of a satisfactory method for permanganate ion in mixtures with manganate ion.

Determination of thiocyanate in the presence of halogens. M. B. Shchigol and N. B. Rundendkaya. Zavodskaya Lab. 13, 1178-80 (1947). Treat 10 ml. 0.1 N KMnO₄ and 15 ml. 2 N NaOH with the thiocyanate soln., let stand in the dark 15 min., then add 1.5 g. KI and 15 ml. 8 N H₂SO₄. After 10 min. titrate the liberated I with thiosulfate.   G. M. Kosolapoff

SHCHIGOL', M. B.

USSR/Metals   Mar 1948
    Bismuth - Determination
    Titration

"Microvolumetric Determination of Bismuth," M. B.
Shchigol', Kiev Med Inst, 2 pp

"Zavod Lab" Vol XIV, No 3 - p. 276-7

Determined that bismuth ions in compounds with acetic
acid and chromate, bichromate, iodate, or oxalate
produce salts that are basically difficult to dis-
solve. Method is based on iodometric titration of
chromate or iodate residues.

                                                    62T76

USSR/Chemistry-Oxalates   Dec 48

"Potentiometric Determination of Oxalates and
Chlorides in an Ammoniacal Medium," M. B. Schigol',
S. M. Birnbaum, Kiev Med Inst, 3 pp

"Zavod Lab" Vol XIV, No 12 *p. 1427-9*

Describes method for potentiometric determination
of oxalate ions in a free state and mixed with
chlorine ions in an ammoniacal medium. States
hypothesis on formation of a complex compound of
type $[Ag(NH_3)_2 X_2]$, with a silver coordination
number of 4.

49/49T28

SHCHIGOL', M.B.

28938 Potentsiometricheskoe opredelenie khromatov i Khlorilov V ammiachnoy
Sirede. Zavodskaya Laboratoriya. 1949, No. 9 S. 1027-30

SO: Letopis' Zhurnal'nykh Statey, Vol. 39, Moskva, 1949

Potentiometric determination of calcium ion in the presence of magnesium ion. S. M. Birnbaum and M. B. Shchigol. Zavodskaya Lab. 15, 402-4(1949); cf. Ibid. 14, 12(1948).—The Ca is pptd. from a hot soln. with standard Na₂C₂O₄, and the excess is back-titrated in ammoniacal soln. with AgNO₃. If the oxalate ppt. is not removed, adsorption takes place; only 1 potential break occurs in titrations if the ppt. is removed. If Mg concn. does not exceed Ca by over 300%, the Ca detn. is readily made as the Mg remains in soln.; the only change in procedure is the addn. of 10% NH₄NO₃ to the cooled mixt. contg. the CaC₂O₄ ppt., followed by NH₄OH to form an ammoniacal complex with Ag oxalate.   G. M. Kosolapoff

Potentiometric determination of chlorides in the presence of bromides and iodides in ammoniacal medium. M. I. Shchigol. Zavodskaya Lab. 15, 523-8 (1949).— The calomel electrode and Ag electrode (treated with dil. HNO₃ contg. NaNO₃) system was used in titrations with AgNO₃. If ¹/₁₀ of the amt. of NH₄OH required for complete Cl complex formation is used in the soln. of the sample Br and I can be titrated directly and completely. If enough NH₄OH is present to form (Ag(NH₃)₂Cl₂)⁻ (10 ml. N NH₄OH per 5 ml. 0.1 N Cl), 2 breaks are observed. The 1st indicates completion of Br or I ion reaction, the 2nd gives the completion of the above complex formation in binary solns., while in ternary solns. 3 breaks occur: iodide, bromides and the Ag-Cl-NH₃ complex formation, in turn. Checks on known solns. were excellent.

G. M. Kosolapoff

A S B - S L A   METALLURGICAL LITERATURE CLASSIFICATION

Potentiometric determination of chromates and chlorides in ammoniacal solutions. M. B. Shchigol and S. M. Birnbaum. Zavodskaya Lab. 15, 1027-30(1949). cf. C.A. 43, 8867. Although titration of K_2CrO_4 with $AgNO_3$ in aq. soln. gives potential jumps corresponding to the formation of $AgCrO_4^-$ and of the pptn. of Ag_2CrO_4), titrations in NH_4OH solns. give 4 potential jumps: formation of $(Ag(NH_3)_2CrO_4)^-$, that of $(Ag(NH_3)_2CrO_4)^-$, and, finally, that of $(Ag(NH_3)_2)_2CrO_4$; the latter break is very clear in 0.1 N NH_4OH but vanishes when the amt. of NH_4OH is reduced considerably. It is possible to det. both Cl^- and CrO_4^{2-} potentiometrically in solns. contg. NH_4OH, especially in the presence of a little NH_4NO_3, by titration with $AgNO_3$. The 1st break is given by Cl^-, the 2nd by CrO_4^{2-}.

G. M. Kosolapoff

C A

1

Potentiometric determination of silver ions in an am
moniacal medium. M. B. Shchigol (Kiev Med. Inst.).
Zavodskaya Lab. 15, 1120-5(1949); cf. C. A. 43, 6943d.
Titration with NH_4CNS or KI is suitable for detg. Ag in
ammoniacal solns. in the presence of $KBrO_3$, KIO_3,
NaH_2PO_4, Na_2HPO_4, Na oxalate; KI can also be used in
the presence of $NaNO_3$ and K_2CrO_4. The inflection points
of all titration curves coincide. Detn. of Ag in Collargol
and Protargol is also readily accomplished by KI titration.
In the presence of Cu, Pb, or Fe, the addn. of 5% Na K
tartrate soln. is advisable.   G. M. Kosolapoff

7

Potentiometric determination of chromates and di-chromates in mixtures. M. B. Shchigol and S. M. Bun-baum (Kiev Med. Inst.). Zavodskaya Lab. 10, 150 2 (1950).—Titrate the sample potentiometrically with NaOH and use a Pt-Pt black electrode to give the total Cr, and make the chromate detn. on a sep. sample by argento-metric titration in NH₄OH with the Ag electrode.

G. M. Kosolapoff

SHCHIGOL, M. B.

Chemical Abst.
Vol. 48 No. 8
Apr. 25, 1954
Analytical Chemistry

Determination of trivalent iron with tetraborate. M. B. Shchigol and N. B. Burchinskaya (Kiev Med. Inst.). J. Anal. Chem. (U.S.S.R.) 7, 325–35(1952)(Engl. translation). See C.A. 47, 1535d. H. L. H.

SHCHIGOL', L. B. and BURGINSKAYA, N. B.

"Determination of Iron in Blood, Drug Preparations, and Water," Vracheonoye Delo, No 9, 1952, pp 853-854.

SHCHUKOL', M. R.

"Composition and instability constants of some silver complexes." (p. 721)

SO: Journal of General Chemistry, (Zhurnal Obshchei Khimii), 1952, Vol. 22, No. 5

SHCHIGOL, M. B.

Chemical Abstracts
Vol. 48 No. 5
Mar. 10, 1954
Inorganic Chemistry

The composition and instability constants of some com-
plex compounds of silver. M. B. Shchigol (Kiev Inst.
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translation).—Sec. C.I. 47, 3107c.   H. L. H.

SHIGOL, M.B.

Volumetric determination of bismuth. compounds in medicinal mixtures. I. M. B. Shigol (Med. Inst., Kiev). *Aptechnoe Delo* 5, No. 5, 24-7(1956).—The method is based on the property of Bi compds. of forming complexes with oxalates which are sol. in $0.1N$ mineral acids. Mix 5-10 cc. of a sol. Bi salt soln. with 5-10 cc. of an approx. $0.4N$ $Na_2C_2O_4$ soln., add methyl red, and titrate the mixt. with $0.1N$ NaOH. To the neutralized soln. add a measured excess of $0.1N$ NaOH, and destroy the Bi oxalate complex by boiling 2-3 min. Upon cooling, titrate with $0.1N$ H_2SO_4 with phenolphthalein. A. S. Mirkin

SHCHigol, M.B.

3203. Determination of boric acid, salts of iron and aluminium when present together. M. B. Shchigol' and N. B. Burchinskaya (Kiev Medicinal Inst.). *Zhur. Anal. Khim.*, 1956, 11 (1), 106–110.— The potentiometric method previously described (*Ibid.*, 1952, 5, 289) is applied to the determination of Al and Fe in the presence of boric acid. Boric acid is determined by adding glycerol to the soln. after Al and Fe have been titrated with 0·1 N borax and titrating with 0·1 N NaOH.

G. S. SMITH

SHCHIGOL', M.B.; BURCHINSKAYA, N.B. (Kiyev)

Volumetric and analytical determination of bismuth in various compounds and drugs. Report No.2. Apt.delo 6 no.2:36-38 Mr-Ap '57.
(BISMUTH)   (MLRA 10:6)

Shchigol, M. B.

A TITRIMETRIC DETERMINATION OF BISMUTH IN THE PRESENCE OF PHOSPHATES, SULPHATES, OXALATES SALICYLATES AND HEAVY METALS

M. B. Shchigol

Kiev Medical Institute

A method for the alkalimetric quantitative determination of bismuth in the presence of sulphates, oxalates, salicylates, phosphates and heavy metals has been developed. The method is simple and fast. It gives reliable results and may be recommended for the quantitative determination of bismuth in the presence of heavy metals, as well as in other mixtures.

SHCHIGOL', M.B.; BURCHINSKAYA, N.B.

Determining zinc in compounds. Apt.delo 7 no.1:48-50 Ja-F '58.
(MIRA 11:3)

1. Iz kafedry obshchey khimii Kiyevskogo meditsinskogo instituta.
(ZINC)

SOV/78-4-9-14/44

5(2)

·AUTHOR: Shchigol', M. B.

TITLE: On Some Properties of the Borates of Zinc and Cadmium

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 9, pp 2014-2019 (USSR)

ABSTRACT: A survey is given of the rapidly increasing number of publications on the subject of borates (Refs 1 - 14) with particular reference to the investigations of A. D. Keshan and coworkers (Refs 7 - 10). Then, the preparation of zinc- and cadmium-borate solutions in water and aqueous boric acid is reported on. The borates were obtained by the addition of borax solution to hot solutions of the nitrates. Analysis of the fine crystalline powders showed the compositions to be $Zn(BO_2)_2 \cdot H_2O$ and $Cd(BO_2)_2 \cdot 7H_2O$. Zinc diborate was also obtained simply by treatment of zinc oxide with boric acid. The solubility of zinc diborate (activity solubility product = $6.56 \cdot 10^{-11}$) is given in table 1, that of cadmium diborate (activity solubility product = $2.31 \cdot 10^{-9}$) in table 2. A. D. Keshan and coworkers (Refs 9, 10)

Card 1/2

On Some Properties of the Borates of Zinc and Cadmium SOV/78-4-9-14/44

indicated that the borates of alkaline-earth and of some heavy metals (Mn, Ag) form complex compounds with boric acid. This was confirmed by the increase in solubility of zinc and cadmium borate produced by rising concentrations of boric acid, as shown in tables 3 and 4. It is assumed that the complex ions $\left[Zn(BO_2)_4\right]^{2-}$ (instability constant = $1.61.10^{-12}$) and $\left[Cd(BO_2)_4\right]^{2-}$ (instability constant = $2.30.10^{-11}$) are formed. (Abstracter's Note: The activity product of zinc diborate is twice given wrongly: p 2015: $-6.56.10^{-11}$, p 2018: $5.56.10^{-11}$. $6.56.10^{-11}$ was given as the correct value of table 1)
There are 4 tables and 24 references, 19 of which are Soviet.

ASSOCIATION: Kiyevskiy meditsinskiy institut (Kiyev Institute of Medicine)

SUBMITTED: May 28, 1958

Card 2/2

SHCHIGOL', M.B.; BURCHINSKAYA, N.B.

Alkalimetric method for the determination of aluminum and iron occur-
ring together and in medicinal compounds. Apt.delo 8 no.5:35-39 S-O
'59.   (MIRA 13:1)

1. Iz kafedry obshchey khimii Kiyevskogo meditsinskogo instituta
Ministerstva zdravookhraneniya USSR.
          (ALKALIS) (IRON--ANALYSIS)   (ALUMINUM--ANALYSIS)

SHCHIGOL', M.B.

Certain properties of salicylate complexes of trivalent iron.
Zhur.neorg.khim. 6 no.6:1294-1299 Je '61.   (MIRA 14:11)

1. Kiyevskiy meditsinskiy institut, Kafedra obshchey khimii.
               (Iron compounds) (Salicylic acid)

SHCHIGOL', M.B.; BURCHINSKAYA, N.B.

Some characteristics of aluminum borates. Zhur.neorg.khim. 6
no.11:2504-2511 '61.   (MIRA 14:10)
                    (Aluminum borate)

SHCHIGOL', M.B.

Some properties of cobalt and nickel borates. Zhur.neorg.khim. 6
no.12:2693-2703 D '61.   (MIRA 14:12)

1. Kiyevskiy meditsinskiy institut, kafedra obshchey khimii.
                    (Cobalt borate) (Nickel borate)

SHCHIGOL', M.B.; BURCHINSKAYA, N.B.

b... tartaric acids. Zhur. neorg. khim. 10 no.9:2090-2096 S '65.
(MIRA 18:10)

1. Kiyevskiy meditsinskiy institut, kafedra obshchey khimii.

SHCHIGOL', M.B.

Copper borates, oxalates, and salicylates. Zhur. neorg. khim.
10 no.9:2097-2107 S '65.
(MIRA 18:10)

1. Kiyevskiy meditsinskiy institut.

PA 14/49T106

USSR/Physics
Astronomy

Jul/Aug 48

"Discussion in the State Astronomical Inst Imen1
Shternberg on the Cosmogonic Hypothesis of
Academician O. Yu. Shmidt," B. M. Shchigolev,
4 3/4 pp

"Astron Zhur" Vol XXV, No 4

Acad Shmidt published several articles elaborating
his views on origin of double stars, origin of
comets, age of earth, etc., from 1944 onwards. In
USSR, work on cosmogony may be valuable to
ideological struggle, hence its critical evaluation

14/49T106

USSR/Physics (Contd) Jul/Aug 48

is obligatory. Discussion organized by Institute is
reported in "Vestnik Mosk Gos Univ." Present
article is transcribed from shorthand notes of
speeches. Shmidt's defense not considered
satisfactory by Shchigolev.

14/49T106